Healthy Efficient New California Homes – Pilot Study

Study participants wanted. Receive up to $560!

Lawrence Berkeley National Laboratory is conducting an in-home monitoring study to measure the performance of ventilation equipment and indoor air quality in new California homes with gas appliances. This study involves setting up air quality and ventilation monitoring devices that will remain in place for a two-week period.

The pilot phase of this study will recruit **two homes**. Homes to be included in the study must have the following key characteristics:

- Single-family detached house,
- Located in **San Francisco Bay Area** or **Sacramento area**,
- Built in 2011 or later,
- Owner occupied with at least 3 occupants,
- Has mechanical ventilation,
- Use natural gas for space heating, water heating, and cooking,
- Smoking is prohibited in home.

More information about our study can be found on our project website: http://hengh.lbl.gov

Project Objectives

This project aims to improve the health, safety, and comfort of new homes by providing adequate ventilation while reducing air infiltration. The in-home monitoring study will measure and characterize performance of the mechanical ventilation systems, and concentrations of key indoor air contaminants. The data will be used to examine the relationships among home ventilation characteristics, measured indoor air quality, and house and household characteristics.

Study Overview

The pilot study will occur in **June to August 2015**. Duration of the in-home monitoring is **three weeks**. The study will measure air quality inside and outside of homes, and use sensors to monitor indoor activities. Air contaminants to be monitored will include particles and gas-phase compounds, such as formaldehyde, NO_2, and CO, which are commonly found in homes.

In addition, the performance of mechanical ventilation systems will be measured using diagnostic tests. For example, field technicians will measure the airflow rates of exhaust fans, forced air system, and outdoor air supply. Air leakage of the building envelope and duct system will also be tested.

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